

Abstract

A bipolar transistor has a base with an epitaxial base layer and a raised base connection region which in a lateral direction in parallel relationship with the substrate surface encloses the emitter which is surrounded by a spacer of insulating material. The epitaxial base layer is raised in a heightwise direction perpendicularly to the substrate surface. An emitter of a T-shaped cross-sectional profile is separated laterally from the outer base portion by a spacer of insulating material. Its vertical bar of the T-shape adjoins with its lower end the inner base portion. The lateral extent of the spacer increases from its interface with respect to the base layer with increasing height above the base layer, wherein a first interface formed by the emitter and the spacer meets a second interface formed by the emitter and the inner base portion at a first angle which is either a right angle or an obtuse angle, and a third interface formed by the spacer and the outer base portion meets the second interface at a second obtuse angle which is larger than the first angle.